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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

KIM, PAUL L

ART UNIT

PAPER NUMBER

2857

DATE MAILED: 04/13/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/997,248

Applicant(s)

WIEGAND, BODO

Examiner

Paul L Kim

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 30 November 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 9, 10, 13-18, and 21-25 are rejected under 35 U.S.C. 102(e) as being anticipated by Bjornson.

With regard to claim 1, Bjornson teaches a method of optimizing equipment maintenance procedures comprising: analyzing the equipment (col. 3, lines 43-49), improving the equipment based on the equipment analysis (fig. 3b, step 332), adjusting maintenance strategies (col. 3, lines 61-67), and modularizing the maintenance procedures (fig. 3c, steps 360-364).

With regard to claims 9 and 10, Bjornson teaches improving the equipment based on the analysis by determining a short-term process to be applied to the results (col. 10, lines 13-23).

With regard to claim 13, Bjornson teaches allocating maintenance strategies based on damage classifications (fig. 3c, steps 350 & 358).

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With regard to claims 14 and 15, Bjornson teaches the step of modularizing comprises summarizing work form the areas of servicing, inspection, and repairs (col. 4, lines 1-5).

With regard to claims 16 and 21-25, Bjornson teaches the step of modularizing comprises the steps of: defining processing based upon existing repair work (fig. 15), auditing the current processes and analyzing the processes (fig. 19, step 1904), optimizing the processes to improve quality (col. 19, lines 31+), designing inter-function processes (fig. 16), standardizing the process elements into models (col. 12, lines 20-30), and describing the modules including providing job descriptions and determining employee qualifications (col. 19, lines 44+).

With regard to claims 17 and 18, Bjornson teaches observing, recording, and documenting duties and procedures that are set forth in guidelines (col. 10, lines 63-65).

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 2-6 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bjornson in view of Barnard et al.

Bjornson teaches analyzing equipment by analyzing failure modes of the equipment, but does not specify generating severity, occurrence, and detection classifications or calculating a risk priority for each failure. Barnard et al teaches determining causes of defects in manufacturing that analyzes equipment by examining the failure modes of the equipment based on failed components of the equipment (col. 1, lines 20-24), generating component and function models (col. 1, lines 46-53), selecting equipment by using an ABC-like analysis (col. 1, lines 24-26), performing a failure mode and effects analysis, and calculating and classifying a risk priority for the failures based on severity and occurrences (col. 1, lines 26-34). It would have been obvious to one of ordinary skill in the art, at the time of the invention, to modify Bjornson, so that a risk-prioritizing mode is included, as taught by Barnard et al, so as to derive the benefit of improved system reliability.

5. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bjornson and Barnard et al in view of Douik et al.

The combinations of Bjornson and Barnard et al teach the step of performing a failure mode that includes indicating possible causes of failure, but does not specify indicating consequences or causes of damages, preventative measures, or classifying causes of damages. Douik et al teaches an equipment diagnosis system that identifies component and function models (col. 12, lines 1+), indicates causes of faults or damages (col. 38, lines 6-12), indicates preventative measures (fig. 5, step 173), and classifies cause of faults or

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damages (col. 14, lines 17+). It would have been obvious to one of ordinary skill in the art, at the time of the invention, to modify Bjornson and Barnard et al, so that causes of damages are indicated and classified, as taught by Douik et al, so as to derive the benefit of a more efficient diagnosis procedure.

6. Claims 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bjornson in view of Saxena.

Bjornson teaches improving the equipment based on the analysis by defining the problem and preparing and evaluating solutions (abstract), but does not specify determining evaluation criteria and their priorities. Saxena teaches a method of diagnosing malfunctions in semiconductor equipment that defines a problem, prepares alternative solutions, determines evaluation criteria and their priorities, compares and selects components, and evaluates the solutions (col. 2, lines 15-54). It would have been obvious to one of ordinary skill in the art, at the time of the invention, to modify Bjornson, so that equipment improvements are prioritized, as taught by Saxena, so as to improve reliability by solving the most important problems early.

7. Claims 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bjornson.

Bjornson teaches documenting employee qualification and job descriptions (fig. 15 & fig. 22A, step 2202) but does not specify documenting process time. The examiner notes, however, that documenting processing time

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of a task or a set of tasks for diagnostic purposes is well known in the art. It would have been obvious to one of ordinary skill in the art, at the time of the invention, to include a processing time feature in the equipment analyzer, so as to derive the benefit of a well coordinated maintenance procedure to save time and expense.

### ***Conclusion***

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Schleiss et al teaches a method of detecting and classifying problems of a process control system.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul Kim whose telephone number is 571-272-2217. The examiner can normally be reached on Monday-Thursday 10:00-6:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marc Hoff can be reached on 571-272-2216. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9306 for regular communications and for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

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PK

April 1, 2004



MARC S. HOFF  
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